

application to the wound.

Please cancel without prejudice claims 3 and 15.

Remarks

Claims 1-3, 5, 9-15, and 17 are pending in the application. Claims 1-3, 5, 9-15, and 17 stand rejected. Claim 1 has been amended. Claims 3 and 15 have been canceled. No new matter is added to the application by this Amendment. Applicant respectfully requests reexamination and reconsideration of the case. Each of the rejections levied in the Office Action is addressed individually below.

I. Rejection under 35 U.S.C. §112, first paragraph, for lack of enablement. Claims 1, 3, 5, 9-13, and 15 have been rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 3 and 15 have been canceled. Applicant submits that the present Amendment obviates this rejection.

II. Rejection under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103 as obvious over Weiss, WO 98/06830. Claims 1, 2, 5, 9-14, and 17 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103 as obvious over Weiss (WO 98/06830). Examiner states that Weiss discloses the preparation of pharmaceutical compositions comprising a human or other mammalian lysyl oxidase and pharmaceutical compositions comprising a human or other mammalian tropoelastin for application to a wound to promote healing. Applicant respectfully disagrees that Weiss teaches pharmaceutical compositions comprising a human or other mammalian tropoelastin that has not been previously cross-linked and that has been kept separate from lysyl oxidase before

application to a wound. Without such a teaching regarding tropoelastin, Weiss cannot anticipate or render obvious the claimed invention because the claims of the present application recite the administration of both tropoelastin and lysyl oxidase to a skin wound to promote healing.

Although Weiss may provide an enabling disclosure for producing recombinant lysyl oxidase and engineering nucleic acids to encode lysyl oxidase, Weiss does not provide an enabling disclosure for producing non-crosslinked tropoelastin to be used in methods for promoting wound healing as claimed in the present application. The Weiss disclosure is directed to "synthetic polynucleotides which encode lysyl oxidase, lysyl oxidase like molecules or variants of these species" and to uses of the expression products thereof. Weiss was not the first to clone the lysyl oxidase gene (Hamalainen *et al.*, "Molecular Cloning of Human Lysyl Oxidase and Assignment of the Gene to Chromosome 5q23.3-31.2" *Genomics* 11(3):508-516, 1991). Rather, Weiss's contribution to the field was the recognition that expression of the lysyl oxidase gene in non-mammalian host cells could be improved if the gene sequence was modified to account for the codon preference of the relevant host.

The Examiner points to certain sections of the Weiss disclosure in rejecting the present claims. Applicant respectfully submits that a careful read of these sections reveals that they cannot anticipate or render obvious the presently claimed invention. Specifically, the present claims recite methods and kits in which lysyl oxidase and not-previously-cross-linked tropoelastin are maintained separate from one another until they are applied to a wound. This feature of the claimed invention ensures that the tropoelastin remains uncross-linked until it is applied to the wound, thereby maximizing the probability that it will become cross-linked to elastine or tropoelastin already present at the wound site rather than to itself.

By contrast, Weiss explicitly indicates that, when lysyl oxidase and tropoelastin are both to be applied to a wound, they should preferably be mixed together *prior* to application to the wound. For example, on page 26, lines 20-24, Weiss says "an expression product of the invention may be included in a matrix including an elastin, tropoelastin, and/or collagen based or amine containing matrix which is itself applied to the wound." As indicated, the lysyl oxidase and tropoelastin are combined *prior* to their application to the wound. Later in the same section, Weiss emphasizes that "*More preferably* the product is administered to the wound by *first* including the product in a matrix which itself is administered to the wound" (page 26, line 38-

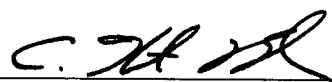
page 27, line 2). Similarly, later in the application, Weiss describes a "tissue glue" comprising "an expression product of the invention and may additionally comprise at least one cross-linkable primary amine material, for example, tropoelastin and/or collagen" and states that this glue "may be applied by *mixing* the primary amine containing material and expression product and applying to the site" (page 32, lines 1-11).

Clearly, Weiss does not contemplate the claimed invention in which lysyl oxidase and tropoelastin are maintained separate from one another until being applied to a wound. In fact, by teaching that it is desirable to mix lysyl oxidase and tropoelastin with one another *prior* to application to a wound site, Weiss teaches strongly away from the claimed invention. Applicant, therefore, submits that Weiss cannot anticipate or render obvious the claimed invention and requests that the rejections be removed.

In view of the forgoing arguments, Applicant respectfully submits that the present case is now in condition for allowance. A Notice to that effect is requested.

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Respectfully submitted,


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